

Environmental Protection Agency

§ 92.11

standard, it shall be rounded, in accordance with ASTM E 29-93a (incorporated by reference at § 92.5), to the same number of significant figures as contained in the applicable standard.

(2) Exhaust emission deterioration factors shall be determined by the certifying manufacturer or remanufacturer for each engine family. The manufacturer's or remanufacturer's determination is subject to the requirements of paragraph (b)(2)(iv) of this section. The deterioration factor relates emissions from low mileage or low hour data to emissions at the end of useful life. If certification data is obtained from a development engine, and the emissions performance of that engine is significantly different from a typical low hour engine, then the deterioration factors may be adjusted for the purpose of certification.

(i) A separate exhaust emission deterioration factor shall be established, as required, for compliance with applicable emission standards for HC, THCE, NMHC, CO, NO_x, particulate and smoke for each engine family.

(ii)(A) For locomotives or locomotive engines not utilizing aftertreatment technology (e.g., catalyst). For HC, THCE, NMHC, CO, NO_x, and PM, additive deterioration factors shall be used; that is, a deterioration factor that when added to the low mileage emission rate equals the emission rate at the end of useful life. However, if the deterioration factor supplied by the manufacturer or remanufacturer is less than zero, it shall be zero for the purposes of this section.

(B) For locomotives or locomotive engines utilizing aftertreatment technology (e.g., catalyst). For HC, THCE, NMHC, CO, NO_x, and PM, Multiplicative deterioration factors shall be used; that is deterioration factors that when multiplied by the low mileage emission rate equal the emission rate at the end of useful life. However, if the deterioration factor supplied by the manufacturer or remanufacturer is less than one, it shall be one for the purposes of this paragraph (b).

(C) For all locomotives and locomotive engines. For smoke, additive deterioration factors shall be used. However, if the deterioration factor supplied by the manufacturer or re-

manufacturer is less than zero, it shall be zero for the purposes of this paragraph (b).

(iii) In the case of a multiplicative exhaust emission deterioration factor, the factor shall be rounded to three places to the right of the decimal point in accordance with ASTM E 29-93a (incorporated by reference at § 92.5). In the case of an additive exhaust emission deterioration factor, the factor shall be established to a minimum of two places to the right of the decimal in accordance with ASTM E 29-93a (incorporated by reference at § 92.5).

(iv) Every deterioration factor must be, in the Administrator's judgement, consistent with emissions increases observed in-use based on emission testing of similar locomotives or locomotive engines. Deterioration factors that predict emission increases over the useful life of a locomotive or locomotive engine that are significantly less than the emission increases over the useful life observed from in-use testing of similar locomotives or locomotive engines shall not be used.

§ 92.10 Warranty period.

Warranties imposed by § 92.1107 shall apply for at least the first third of the full useful life of the locomotive or locomotive engine, or for the same period during which the manufacturer or remanufacturer provides any other mechanical warranty, whichever is longer. A copy of the manufacturer's or remanufacturer's warranty shall be submitted with the application for certification.

§ 92.11 Compliance with emission standards in extraordinary circumstances.

The provisions of this section are intended to address problems that could occur near the date on which more stringent emission standards become effective, such as the transition from the Tier 1 standards to the Tier 2 standards on January 1, 2005.

(a) In appropriate extreme and unusual circumstances which are clearly outside the control of the manufacturer and which could not have been avoided by the exercise of prudence, diligence, and due care, the Administrator may permit a manufacturer, for